

REMARKS

Claims 10, 26, and 31 have been amended. Claims 1, 2, 4-6, 8, 10-11, 18-22, and 26-35 are pending in the application.

Section 103(a) Rejections

The Office Action rejected claims 1, 2, 4-6, 8, 10, 11, 18-22 under 35 U.S.C. § 103(a) as being unpatentable over Amberg et al. (U.S. Patent 6,075,704) (hereinafter “Amberg”) in view of Broeksteeg (U.S. Patent 5,066,236) (hereinafter “Broeksteeg”), in further view of Provencher et al. (U.S. Patent 5,860,816) (hereinafter “Provencher”), in further view of HDM (hereinafter “HDM”), in further view of Weber et al. (U.S. Patent 4,820,169) (hereinafter “Weber”). Applicant respectfully disagrees with the rejection.

Applicant respectfully reasserts that the Examiner has not presented a prima facie case for combining Amberg, Broeksteeg, Provencher, HDM, and Weber. As stated in the MPEP §2142:

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant’s disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (emphasis added)

Applicant respectfully submits that it appears the Examiner is using hindsight to combine components of the prior art together in a piecemeal fashion. Furthermore, there is no suggestion or motivation in the references or in the knowledge generally available to combine Amberg, Broeksteeg, Provencher, HDM, and Weber. In addition, the references teach away from each other.

For example, the Examiner uses Amberg to teach “coplanar circuit boards” (Office Action, page 2) and HDM and Weber to teach power and guide modules. However, the power and guide modules of HDM and Weber connect two boards perpendicular to each other. Neither HDM nor Weber appear to teach power and guide modules for parallelly connected boards. The Examiner states “Weber and HDM connectors could be used with coplanar boards by bending all contacts at 90 degrees (Office Action, page 4)”. However, none of the cited art appears to teach bending the contacts at 90 degrees to be used with coplanar boards. Furthermore, the contacts of Weber and HDM cannot be simply bent at 90 degrees. For example, the opposing contacts in both HDM and Weber are not at the edge of the board. If these contacts were bent at 90 degrees, a part of both circuit boards would overlap, putting pressure on the components of the underlying circuit board. There also does not appear to be any teaching in the references for how to bend the contacts. Applicant submits claims 1, 10, and 18 and claims 2, 4-6, 8 and 11 and 19-22, 30 dependent on claims 1, 10, and 18 are allowable for at least the above reasons.

In addition, to establish a *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974), MPEP § 2143.03. Neither Amberg, Broeksteeg, Provencher, HDM, or Weber disclose, teach, or suggest “a conductive layer coupled to one or more compliant pins, wherein the one or more compliant pins coupled to the conductive layer secure the one or more wafers to the expander board” (emphasis added) as recited in claim 10. Applicant submits that claim 10 and claim 11 dependent on claim 10 are allowable for at least the above reasons.

The Office Action has rejected claims 26-35 under 35 U.S.C. 103(a) as being unpatentable over Broeksteeg in view of Chen et al. (U.S. Patent No. 5,472,354) (hereinafter “Chen”), in further view of Weber, in further view of HDM, in further view of Masuda et al. (U.S. Patent No. 5,616,034) (hereinafter “Masuda”), in further view of Dent (U.S. Patent No. 5,793,617) (hereinafter “Dent”), in further view of Siwinski (U.S.

Patent No. 5,116,239) (hereinafter “Siwinski”). Applicant respectfully disagrees with the rejection.

Applicant respectfully reasserts that the Examiner has not presented a prima facie case for combining Broeksteeg, Chen, Weber, HDM, Masuda, Dent, and Siwinski. There is no suggestion or motivation in the references or in the knowledge generally available to combine Broeksteeg, Chen, Weber, HDM, Masuda, Dent, and Siwinski. In addition, the references teach away from each other because each depends on elements for making different types of connections. For example, Broeksteeg and HDM teach connectors for connecting a printed circuit board to a backplane while Masuda teaches a connector for a power supply apparatus. In addition, Dent teaches a connector for a compact expansion card, and Siwinski teaches a connector for a cable.

Furthermore, neither Broeksteeg, Chen, Weber, HDM, Masuda, Dent, nor Siwinski disclose, teach, or suggest “a joinder module wherein the joinder module couples multiple connectors in series” as recited in claim 26. The Examiner states “Siwinski at 36,16 and Chen at 26 show parts with latches and read as joinder modules (Office Action, page 3).” However, fixed connector parts 36 and 16 of Siwinski and blade-like plug contact rows 16 of Chen are not joinder modules. In addition, 36, 16 of Siwinski and 16 of Chen appear to only connect a connector with a connector across from the connector on a different circuit board unlike the joinder module of claim 26 that “couples multiple connectors in series (emphasis added).” Applicant asserts claim 26 and claims 27-29 dependent on claim 26 are allowable for at least the above reasons.

Furthermore, neither Broeksteeg, Chen, Weber, HDM, Masuda, Dent, or Siwinski disclose, teach, or suggest “the conductive layer is coupled to one or more compliant pins that contract into one or more respective holes on an expander board to secure the one or more wafers to the expander board” as recited in claim 31. None of the cited references appears to teach these pins for securing a wafer to the expander board. In addition, Broeksteeg teaches connectors for connecting a printed circuit board to a backplane not to “couple the expander board and a circuit board substantially in parallel” as recited in

claim 31. As discussed above, the types of contacts shown in Broeksteeg, Weber, and HDM cannot be simply bent 90 degrees. Therefore, the cited references do not appear to teach all of the elements of claim 31. Applicant asserts claim 31 and claims 32-35 dependent on claim 31 are allowable for at least the above reasons.

The Office Action has rejected claims 18-22 under 35 U.S.C. 103(a) as being unpatentable over Amberg, in view of Broeksteeg, in further view of Provencher, in further view of HDM, in further view of Weber, in further view of Masuda, in further view of Dent. The Applicant respectfully disagrees with the rejection.

There is no suggestion or motivation in the references or in the knowledge generally available to combine Amberg, Broeksteeg, Provencher, HDM, Weber, Masuda, and Dent. In addition, as discussed above, the references teach away from each other. Applicant asserts claim 18 and claims 19-22 dependent on claim 18 are allowable for at least the above reasons.

CONCLUSION

In light of the foregoing remarks, Applicant submits the application is in condition for allowance, and an early notice to that effect is requested.

The Commissioner is authorized to charge any fees which may be required, or credit any overpayment, to Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C. Deposit Account No. 50-1505\5681-49300\BNK.

Respectfully submitted,



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